

LISTING OF CLAIMS:

1. (Previously Presented) A method of producing sealed packages containing pourable food products from a tube of heat seal sheet packing material fed along a vertical path and filled continuously with said food product; said method comprising the steps of:

- pressure gripping equally spaced cross sections of said tube by means of at least two pairs of jaws acting cyclically and successively on the tube;

- cutting said tube, at each of said cross sections, along a respective parting line; and then

- heat sealing the packing material of said tube on opposite sides of said parting line, wherein the cutting operation is performed before the sealing operation while the tube is continuously filled with said food product.

2. (Previously Presented) A method of producing sealed packages containing pourable food products from a tube of heat seal sheet packing material fed along a vertical path and filled continuously with said food product; said method comprising the steps of:

- pressure gripping equally spaced cross sections of said tube by means of at least two pairs of jaws acting cyclically and successively on the tube;

- cutting said tube, at each of said cross sections, along a respective parting line; and

- heat sealing the packing material of said tube on opposite sides of said parting line;

wherein said heat seal step is performed by inducing, on opposite sides of said parting line of said tube of packing material, electric loss currents traveling along substantially symmetrical paths with respect to the parting line.

3. (Previously Presented) A method of producing aseptic sealed packages containing pourable food products from a tube of heat seal sheet packing material comprising at least one layer of electrically conductive barrier material fed along a vertical path and filled continuously with said food product; said method comprising the steps of:

- pressure gripping equally spaced cross sections of said tube by means of at least two pairs of jaws acting cyclically and successively on the tube;

- cutting said tube, at each of said cross sections, along a respective parting line; and then

- heat sealing the packing material of said tube on opposite sides of said parting line, wherein said heat seal step is performed by inducing electric loss current in said packing material of said tube.

4. (Previously Presented) A packing unit for producing sealed packages containing pourable food products from a tube of heat seal sheet packing material fed along a vertical path and filled continuously with said food product, said unit comprising a fixed structure; at least two pairs of jaws movable with respect to said structure and acting cyclically and successively on said tube to pressure grip equally spaced cross sections of the tube; and sealing means and cutting means carried by each said pair of jaws to respectively perform, on each said cross section of said

tube of packing material gripped between the jaws, a heat seal operation and a cutting operation along a respective parting line;

comprising control means for controlling said jaws, said sealing means and said cutting means to perform, on said tube of packing material, first said cutting operation along said parting line and then said heat seal operation on opposite sides of the parting line; and

, wherein the cutting operation is performed before the sealing operation while the tube is continuously filled with said food product.

5. (Previously Presented) A packing unit for producing sealed packages containing pourable food products from a tube of heat seal sheet packing material fed along a vertical path and filled continuously with said food product, said unit comprising a fixed structure; at least two pairs of jaws movable with respect to said structure and acting cyclically and successively on said tube to pressure grip equally spaced cross sections of the tube; and sealing means and cutting means carried by each said pair of jaws to respectively perform, on each said cross section of said tube of packing material gripped between the jaws, a heat seal operation and a cutting operation along a respective parting line; wherein said sealing means comprise heating means in turn comprising, for each pair of said jaws, at least two elongated active surfaces interacting with each said cross section of said tube gripped between the jaws, and located on opposite sides of the respective said parting line; and

, wherein the cutting operation is performed before the sealing operation while the tube is continuously filled with said food product.

6. (Previously Presented) A packing unit for producing aseptic sealed packages containing pourable food products from a tube of heat seal sheet packing material comprising at least one layer of electrically conductive barrier material fed along a vertical path and filled continuously with said food product, said unit comprising a fixed structure; at least two pairs of jaws movable with respect to said structure and acting cyclically and successively on said tube to pressure grip equally spaced cross sections of the tube; and sealing means and cutting means carried by each said pair of jaws to respectively perform, on each said cross section of said tube of packing material gripped between the jaws, a heat seal operation and a cutting operation along a respective parting line;

comprising control means for controlling said jaws, said sealing means and said cutting means to perform, on said tube of packing material, first said cutting operation along said parting line and then said heat seal operation on opposite sides of the parting line, wherein said sealing means comprise electric-current-induction heating means carried by one of said jaws in each pair; contrasting means carried by the other of said jaws in said pair and cooperating with said heating means; and electric current generating means for supplying said heating means.

7. (Previously Presented) A unit as claimed in Claim 6, wherein said layer of electrically conductive material of said packing material is made of aluminum.

8. (Previously Presented) A unit as claimed in Claim 6, wherein said heating means comprise, for each pair of said jaws, at least two elongated active surfaces

interacting with each said cross section of said tube gripped between the jaws, and located on opposite sides of the respective said parting line.

9. (Previously Presented) A unit as claimed in Claim 8, wherein said heating means comprise, for each pair of said jaws, four elongated said active surfaces interacting with each said cross section of said tube gripped between the jaws, and located in pairs on opposite sides of the respective said parting line; said active surfaces inducing, on opposite sides of said parting line of each said cross section of said tube of packing material, electric loss currents traveling along substantially symmetrical paths with respect to the parting line.

10. (Previously Presented) A unit as claimed in Claim 8, wherein said heating means comprise, for each said active surface, a projection projecting frontwards from the active surface and extending substantially the whole length of the active surface.

11. (Previously Presented) A unit as claimed in Claim 4, wherein said cutting means comprise at least one cutting element carried by one of said jaws in each pair and movable, with respect to the jaws, crosswise to said tube of packing material; and first actuating means for moving said cutting element between an idle position, and a cutting position in which the cutting element projects frontwards from the respective said jaw.

12. (Previously Presented) A packing unit for producing sealed packages containing pourable food products from a tube of heat seal sheet packing material

fed along a vertical path and filled continuously with said food product, said unit comprising a fixed structure; at least two pairs of jaws movable with respect to said structure and acting cyclically and successively on said tube to pressure grip equally spaced cross sections of the tube; and sealing means and cutting means carried by each said pair of jaws to respectively perform, on each said cross section of said tube of packing material gripped between the jaws, a heat seal operation and a cutting operation along a respective parting line;

comprising control means for controlling said jaws, said sealing means and said cutting means to perform, on said tube of packing material, first said cutting operation along said parting line and then said heat seal operation on opposite sides of the parting line, wherein said cutting means comprise at least one cutting element carried by one of said jaws in each pair and movable, with respect to the jaws, crosswise to said tube of packing material; and first actuating means for moving said cutting element between an idle position, and a cutting position in which the cutting element projects frontwards from the respective said jaw and comprising first and second hook means carried by respective said jaws in each pair; and second actuating means for pressure engaging said first and second hook means in an engaged position corresponding to a closed position of the jaws on said tube of packing material.

13. (Previously Presented) A unit as claimed in Claim 12, wherein said control means comprise a central control unit connected to said first and second actuating means and to an electric current generator.

14. (Previously Presented) A sealed package containing a pourable food product, produced according to the method defined in Claim 1, and comprising a transverse sealing region; wherein the full height of said transverse sealing region is sealed completely.